

Herz Oxford Domestic Hot Water Heat Interface Unit



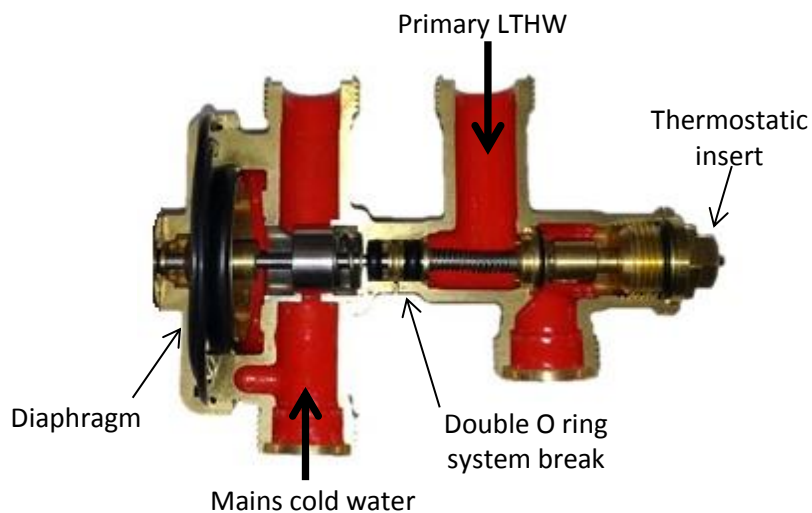
General Description

The Herz Oxford DHW only HIU is suitable for all community schemes and enables LTHW from a central plant to provide DHWS to each dwelling with complete hydraulic separation between the LTHW primary and the DHW systems.

The HIU is a complete package comprising of all components mounted on a frame, factory assembled and tested.

Main Components

Pressure Temperature Control Valve



As a hot water tap is opened the pressure temperature control valve reacts to the difference in pressure via a diaphragm and opens allowing the cold and primary heating water to flow through the heat exchanger. In order to prolong the life of the DHW heat exchanger and prevent lime scale build up, the temperature of the domestic hot water is controlled by a thermostat fitted to the pressure temperature control valve. Using an immersion sensor, this thermostat controls the temperature of the hot water that exits the heat exchanger and regulates the pressure temperature control valve thus maximising the energy efficiency of both the HIU and the primary system.

Thermostatic Bypass Valve



The Thermostatic circulation bypass valve utilises a return temperature limiter head fitted to a thermostatic valve installed in a bypass between the primary flow and return pipework within the HIU. This maintains a minimum primary temperature when the heat exchanger is not in use and ensures a quick response time at the hot tap.

HIU Ball Valves

The Herz Oxford HIU is fitted with special ball valves designed specifically for the purpose. The ball valves are delivered fitted to the HIU but can be removed and installed at first fix if required. The HIU ball valves are fitted with drain valves to facilitate draining with integral test points fitted on the primary flow and return valves to aid additional temperature or pressure measurement if required. The ball valves have union connections for convenience and to allow the HIU to be easily removed for servicing.



Flushing Bypass



The Herz Oxford HIU can be fitted with a Herz HIU flushing bypass, this is a custom made valve designed to facilitate the flushing of the primary system without the water circulating through the HIU as recommended in BSRIA Guide BG 62/2015. The flushing bypass valve can be connected directly to the HIU ball valves at first fix so that primary flushing can be carried out before the HIU is fitted.



Dual Orientation

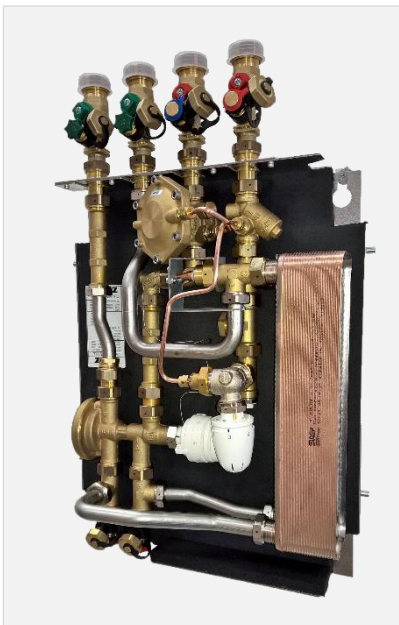
The Herz Oxford HIU has been designed so that it can be installed with the ball valve connections at the top or at the bottom. The fully insulated cover will fit onto the HIU regardless of the installed orientation. An optional ball valve cover is available if required, this can be fitted to the top or bottom of the cover as appropriate to the orientation of the HIU.



Oxford HIU for
bottom entry
installation



Oxford HIU for
bottom entry
installation inc cover
with optional ball
valve cover



Oxford HIU for
top entry
installation



Oxford HIU for top
entry installation
with cover

Other Features

- ▶ Instantaneous hot water to properties
- ▶ Low primary return temperature maximises system efficiency
- ▶ Fully insulated cover and back board
- ▶ Option for heat meter (110mm Spool piece provided as standard)
- ▶ Option for water meter (110mm Spool piece provided as standard)
- ▶ WRAS approved products utilised where required
- ▶ 18mm stainless steel pipe work
- ▶ Lockable cover with security fixing screw
- ▶ Dual orientation for ease of connection
- ▶ Optional ball valve cover available if required

Function

Domestic hot water is generated via the DHW heat exchanger mounted in the HIU and provides instantaneous hot water on demand.

The temperature of the DHW is controlled by a thermostatic head with an immersion sensor, this head controls the temperature of the hot water that exits the heat exchanger and regulates the primary water flowrate.

When a hot water tap is opened the drop in pressure in the hot water pipe will open the 4 port pressure temperature control valve which in turn will allow primary hot water into the heat exchanger.

When the hot water demand ceases the pressure temperature control valve will immediately stop the primary flow into the heat exchanger. Therefore there is no drain on the primary heating when there is no demand, so no “extra energy usage” when residents are on holiday for example.

A thermostatic circulation bypass valve is fitted to maintain a minimum primary temperature when there is no demand for hot water and the heat exchanger is not in use. This provides a quick DHW response and avoids unnecessary energy usage for the occupier.

Energy Metering

As an option the HIU can be provided with a built in battery powered energy meter mounted in the primary heating return pipe.

The meter will measure flow using the ultrasonic principle with an accuracy complying with EN1434 and MID in Class 2 with dynamic range of 1:250 (qi:qp)

The heat meter has options for pulse, M bus or radio to allow remote reading with hand held scanner, drive by or remotely via GPRS. All necessary system hardware and software is available on request.

Pre-payment options are available on request.

The heat calculator will display energy usage in kW hours.

Battery life approximately 12 years.

A cold water meter can be fitted into the HIU, this can have a pulse, M-Bus or radio output as required.



Oxford HIU Technical Data

| Description | 15 & 20 l/min Data | 30 l/min Data |
|--|-----------------------|-----------------------|
| Maximum DHW output Oxford | 55 kW | 84 kW |
| Maximum primary supply temperature | 90°C | 90°C |
| Maximum DHW temperature | 55°C | 55°C |
| Maximum DHW flowrate Oxford | 20 l/min | 30 l/min |
| Minimum DP at 85°C | 30 kPa | 50 kPa |
| Maximum working pressure primary side | 10 bar | 10 bar |
| Maximum working pressure DHW side | 10 bar | 10 bar |
| Min cold water pressure for max output | 2.5 bar | 4 bar |
| Ball valve connections | 22mm/15mm compression | 22mm/15mm compression |
| Dimensions H x W x D | 490mm x 400mm x 160mm | 770mm x 460mm x 200mm |
| Dimensions H x W x D (with ball valve cover) | 600mm x 400mm x 160mm | 890mm x 460mm x 200mm |

Oxford HIU Flow Data 15 & 20 l/min

| DHW | | 50/10°C | 50/10°C | 50/10°C | 50/10°C | 50/10°C | DHW Temperature |
|--------|----------|---------|---------|---------|---------|---------|--------------------------|
| Output | Flowrate | 60°C | 65°C | 70°C | 75°C | 80°C | Primary Flow Temperature |
| 28 kW | 10 l/min | 16.1 | 14.1 | 13.0 | 12.2 | 11.7 | Primary Return Temp (°C) |
| | | 540 | 463 | 411 | 375 | 340 | Primary Flowrate (l/h) |
| 42 kW | 15 l/min | 16.0 | 14.4 | 13.9 | 13.0 | 12.5 | Primary Return Temp (°C) |
| | | 762 | 693 | 620 | 564 | 523 | Primary Flowrate (l/h) |
| 55 kW | 20 l/min | 14.8 | 14.4 | 13.9 | 13.4 | 12.8 | Primary Return Temp (°C) |
| | | 887 | 837 | 775 | 717 | 664 | Primary Flowrate (l/h) |

Oxford HIU Flow Data 30 l/min

| DHW | | 50/10°C | 50/10°C | 50/10°C | 50/10°C | 50/10°C | DHW Temperature |
|--------|----------|---------|---------|---------|---------|---------|--------------------------|
| Output | Flowrate | 60°C | 65°C | 70°C | 75°C | 80°C | Primary Flow Temperature |
| 55 kW | 20 l/min | 16.8 | 14.8 | 13.5 | 12.8 | 12.3 | Primary Return Temp (°C) |
| | | 1091 | 936 | 823 | 757 | 698 | Primary Flowrate (l/h) |
| 73 kW | 26 l/min | 15.9 | 14.6 | 13.5 | 12.9 | 12.6 | Primary Return Temp (°C) |
| | | 1292 | 1135 | 1015 | 933 | 875 | Primary Flowrate (l/h) |
| 84 kW | 30 l/min | 15.2 | 13.9 | 13.5 | 12.7 | 12.4 | Primary Return Temp (°C) |
| | | 1364 | 1201 | 131 | 1014 | 953 | Primary Flowrate (l/h) |

Oxford HIU Versions

| Part no | DHW Flowrate | Description |
|---------|---------------|--|
| 1400827 | 15 l/min | Herz Oxford DHW only HIU |
| 1400854 | 15 l/min | Herz Oxford DHW only HIU inc. Heat Meter |
| 1400828 | 20 l/min | Herz Oxford DHW only HIU |
| 1400855 | 20 l/min | Herz Oxford DHW only HIU inc. Heat Meter |
| 1402364 | 30 l/min | Herz Oxford DHW only HIU |
| 1400856 | 30 l/min | Herz Oxford DHW only HIU inc. Heat Meter |
| 1402365 | 15 & 20 l/min | Herz Oxford optional ball valve cover |
| 1402366 | 30 l/min | Herz Oxford optional ball valve cover |

| | | |
|------------|-----------|--|
| 1401888 | Accessory | Herz primary flushing bypass for connection to the HIU ball valves |
| HVHIUWM-01 | Accessory | SMART C+ single jet water meter WRAS approved, MID approved |

Water Quality

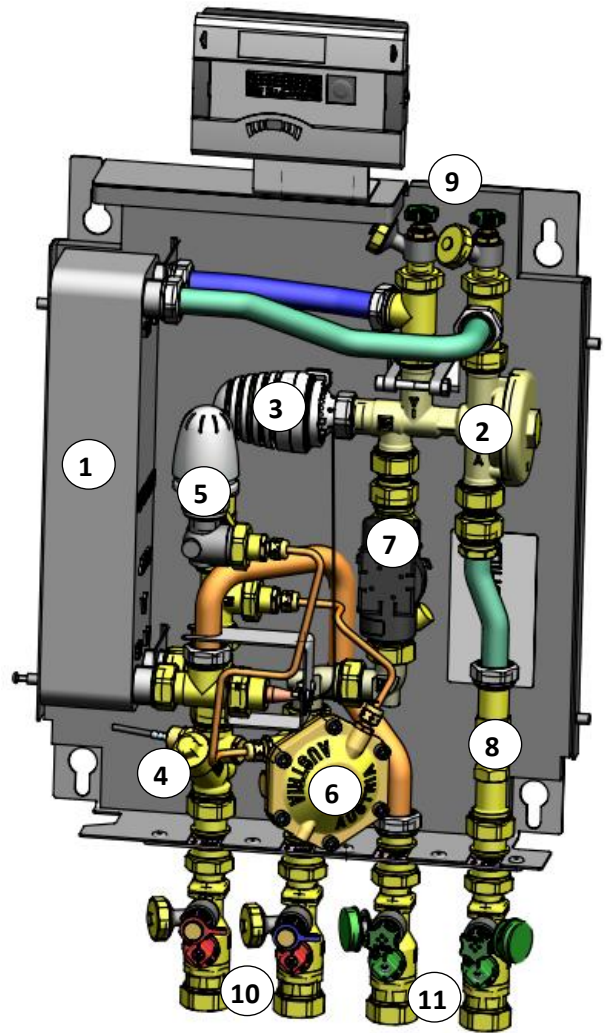
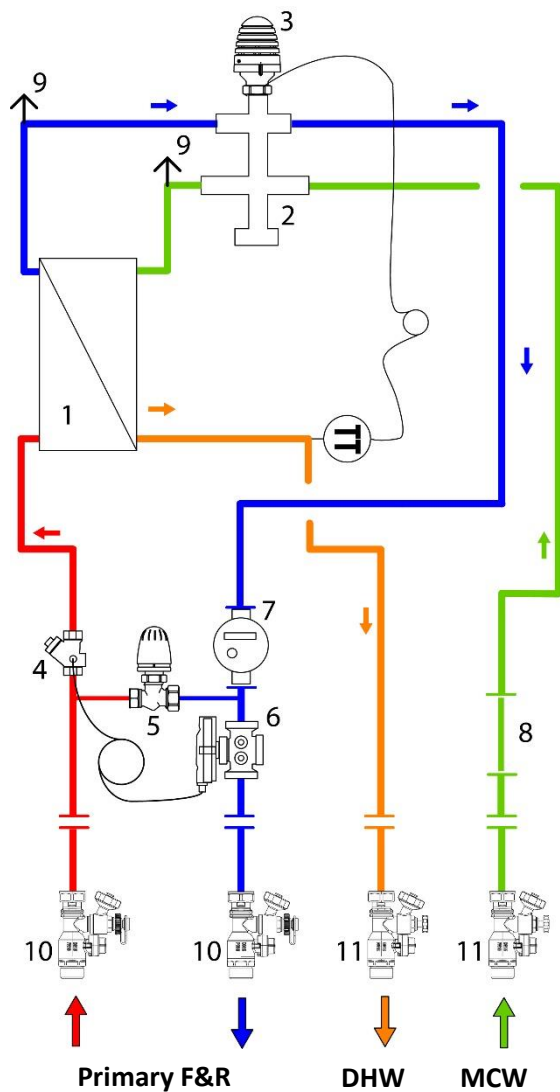
Consideration should be given to the use of a scale prevention device when aggressive water supplies are present.

WRAS Approval Number

Herz Oxford HIU WRAS Certificate No: 1706302

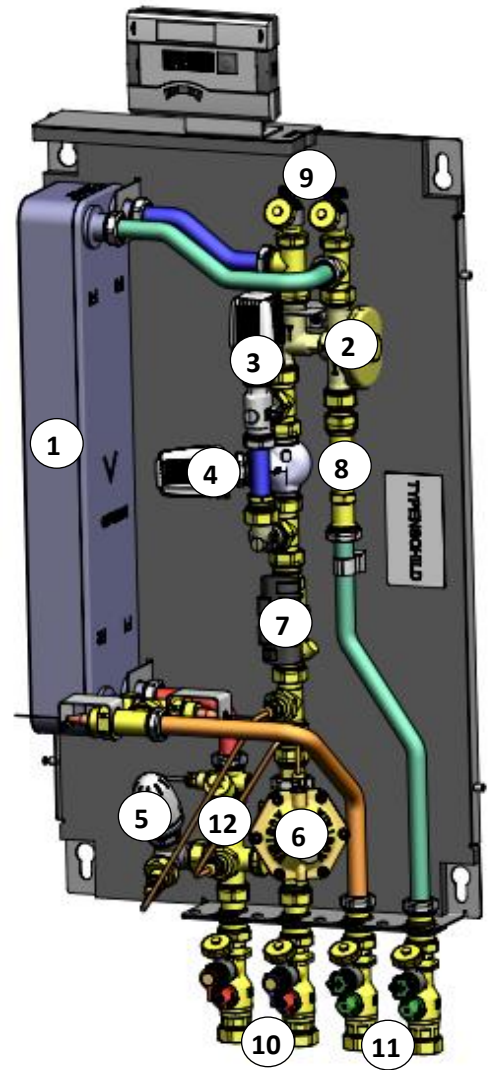
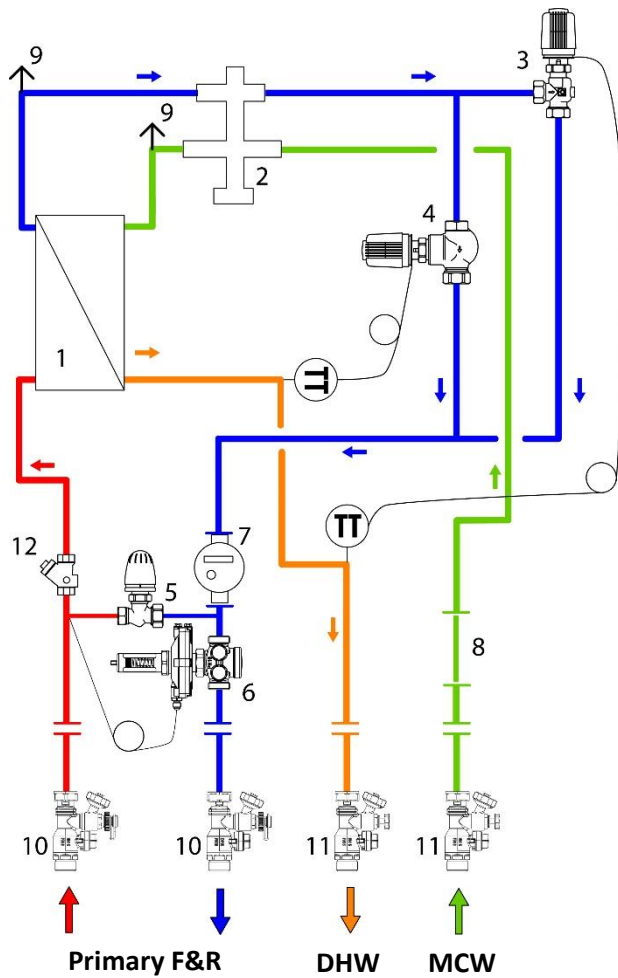


Oxford HIU 15 & 20 l/min Schematic



| No | Description |
|----|--|
| 1 | DHW heat exchanger - Stainless Steel brazed |
| 2 | Pressure temperature control valve |
| 3 | Thermostatic head with contact sensor |
| 4 | Primary strainer 0.5mm mesh |
| 5 | Primary thermostatic circulation bypass valve |
| 6 | Differential pressure control valve |
| 7 | Optional heat meter |
| 8 | Optional water meter |
| 9 | Drain and vent valves |
| 10 | Isolation and drain ball valves with test points |
| 11 | Isolation and drain ball valves |

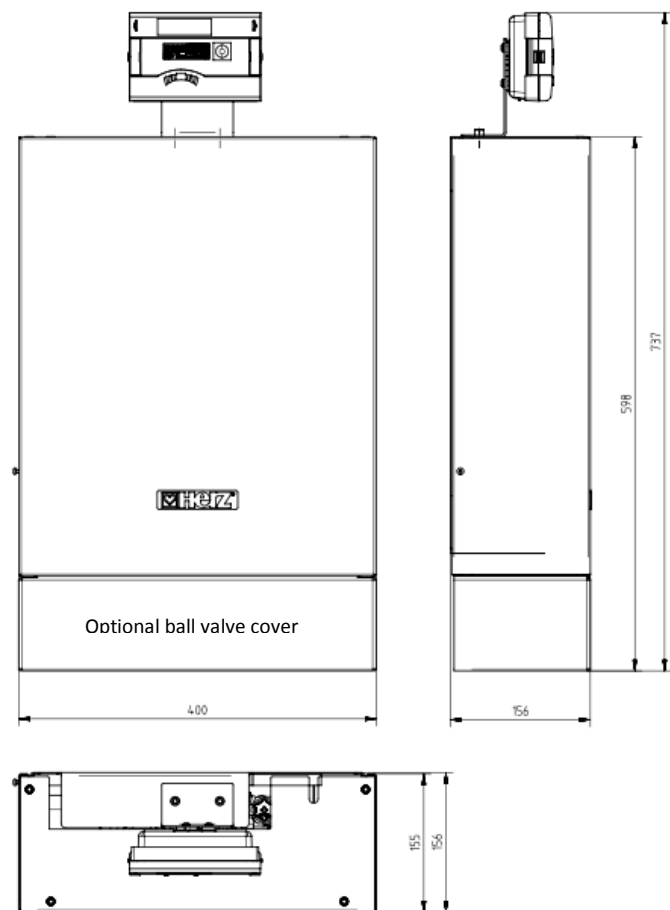
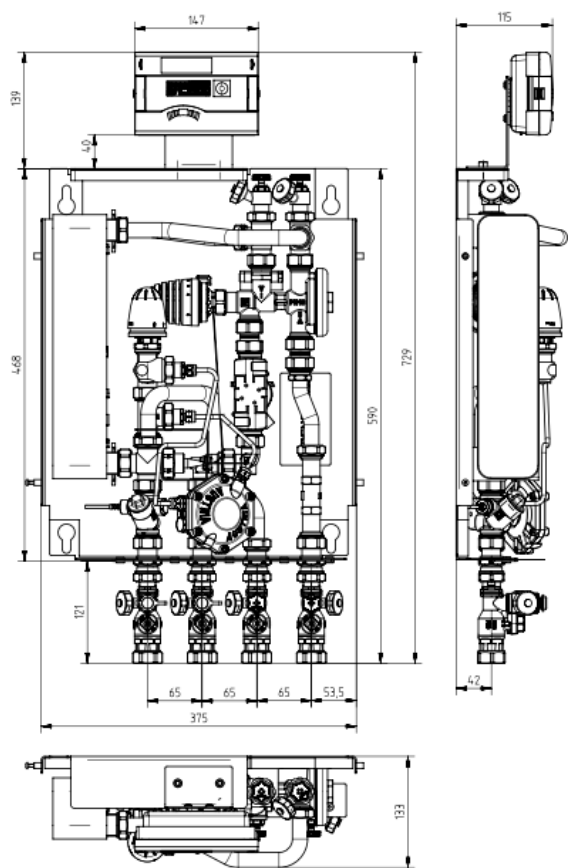
Oxford HIU 30 l/min Schematic



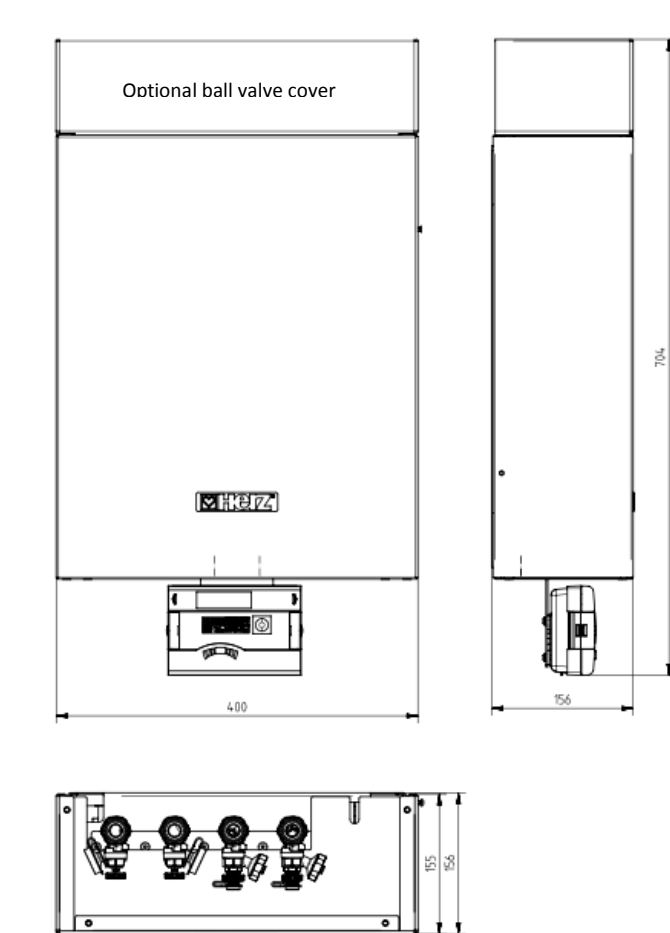
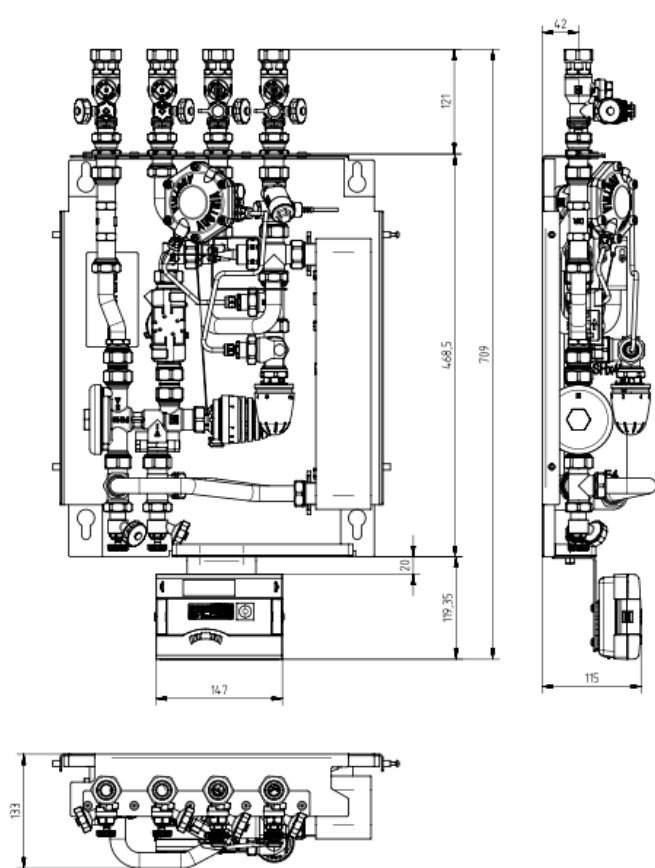
| No | Description |
|----|---|
| 1 | DHW heat exchanger - Stainless Steel brazed |
| 2 | Pressure temperature control valve |
| 3 | Low flow Thermostatic Valve & Head with contact sensor |
| 4 | High flow Thermostatic Valve & Head with contact sensor |
| 5 | Primary thermostatic circulation bypass valve |
| 6 | Differential pressure control valve |
| 7 | Optional heat meter |
| 8 | Optional water meter |
| 9 | Drain and vent valves |
| 10 | Isolation and drain ball valves with test points |
| 11 | Isolation and drain ball valves |
| 12 | Primary strainer 0.5mm mesh |

Oxford HIU 15 & 20 l/min Drawings

Bottom entry version

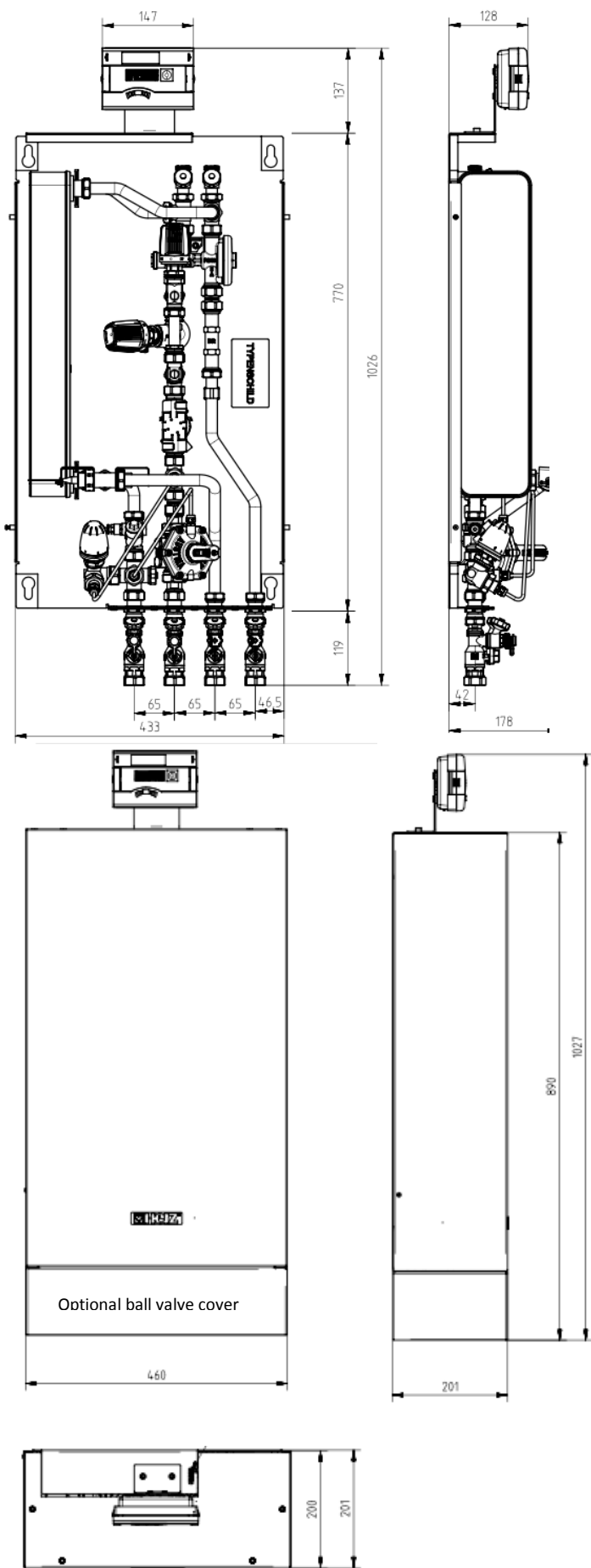


Top entry version

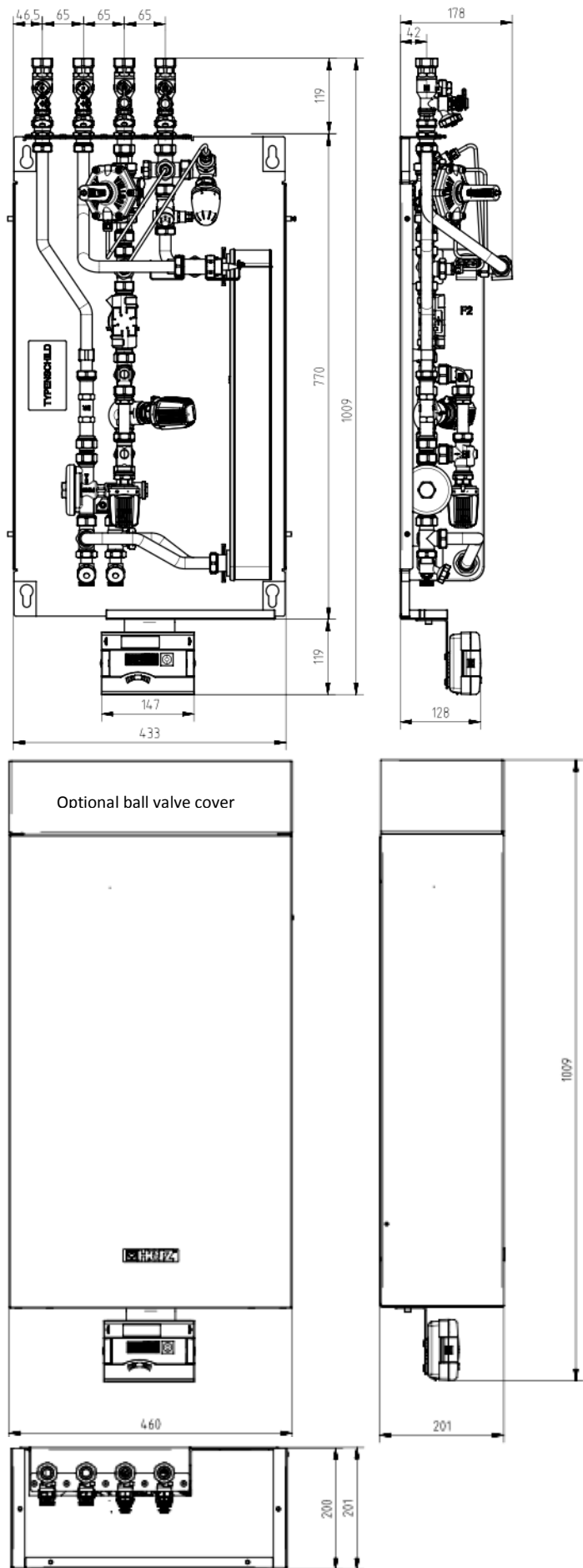


Oxford HIU 30 l/min Drawings

Bottom entry version



Top entry version



Other Herz HIUs

Herz Guildford HIU

Main Features

- ▶ Instantaneous hot water and space heating to properties
- ▶ Twin heat exchangers provide hydraulic separation
- ▶ Thermostatic hot water temperature control
- ▶ Tempering valve to prevent risk of scalding
- ▶ Low primary return temperature maximises system efficiency
- ▶ Primary thermostatic circulation bypass
- ▶ Differential Pressure Control Valve
- ▶ Insulated back board, cover, secondary heating heat exchanger & heating pipework
- ▶ Top or bottom connections available
- ▶ First fix rail ball valves with drain valves and test points
- ▶ Heat meter
- ▶ Full WRAS approval



Herz Ecosse HIU

Main Features

- ▶ Single HTG heat exchanger provides hydraulic separation
- ▶ Low primary return temperature maximises system efficiency
- ▶ "S type" configuration for secondary heating and hot water storage systems if required
- ▶ Differential pressure control valve across the primary
- ▶ Zone valve to ensure that water circulates through the heat exchanger only when there is a demand
- ▶ First fix rail ball valves with drain valves and test points
- ▶ Top and bottom connections available
- ▶ Suitable for radiators or under floor heating systems
- ▶ Insulated heat exchanger & pipework
- ▶ Heat meter



Notes

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Herz Valves UK Ltd.

Progress House, Moorfield Point
Moorfield Road, Slyfield Industrial Estate
Guildford, Surrey GU1 1RU
Tel: 01483 502211, Fax: 01483 502025
E-Mail: sales@herzvalves.com

Herz Armaturen GmbH

Richard-Strauss-Str. 22, A - 1230 Vienna
Tel.: +43 (0)1 616 26 31-0, Fax: +43 (0)1616 26 31-27
E-Mail: office@herz.eu

www.herzvalves.com

